(19) World Intellectual Property Organization International Bureau



4 10 18 3 CILLERS II COSTIC INCIDENTALI COM CONTROLO II IN CONTROLO CILLE CONTROLO II CONTROLO II IN CONTROLO I

(43) International Publication Date 23 June 2005 (23.06.2005)

PCT

(10) International Publication Number WO 2005/055803 A2

(51) International Patent Classification⁷:

A61B

(21) International Application Number:

PCT/US2004/039913

(22) International Filing Date:

29 November 2004 (29.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/526,719

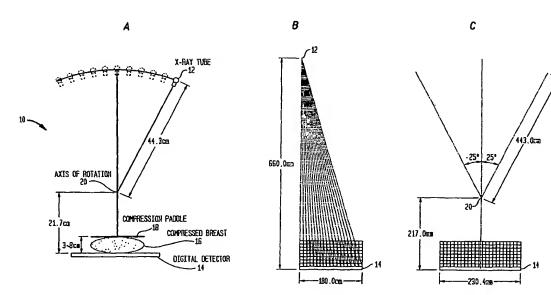
3 December 2003 (03.12.2003) Us

- (71) Applicant (for all designated States except US): THE GENERAL HOSPITAL CORPORATION d/b/a MASSACHUSETTS GENERAL HOSPITAL [US/US]; 55 Fruit Street, Boston, MA 02114 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): WU, Tao [US/US]; 3 River Street, Winchester, MA 01890 (US). MOORE, Richard [US/US]; 151 Annursnac Hill Road, Concord, MA 01742 (US). KOPANS, Daniel [US/US]; 20 Manitoba Road, Waban, MA 02468 (US).

- (74) Agent: GEARY, William, C., III; Nutter McClennen & Fish LLP, World Trade Center West, 155 Seaport Boulevard, Boston, MA 02210-2604 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: MULTI-SEGMENT CONE-BEAM RECONSTRUCTION SYSTEM AND METHOD FOR TOMOSYNTHESIS IMAGING



(57) Abstract: A tomosynthesis method for creating a three-dimensional reconstruction of a target element volume acquires radiation absorbance images of the target element volume through a limited plurality of positions. The target element volume is divided into a plurality of volume segments and a reconstruction algorithm is applied to each segment to generate a three-dimensional reconstruction of each volume segment. The three-dimensional reconstruction of each volume segment is then merged to create a three-dimensional reconstruction of the target volume. A tomosynthesis system and a computer program product for carrying out tomosynthesis are also provided.



WO 2005/055803 A2



Published:

 without international search report and to be republished upon receipt of that report For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.